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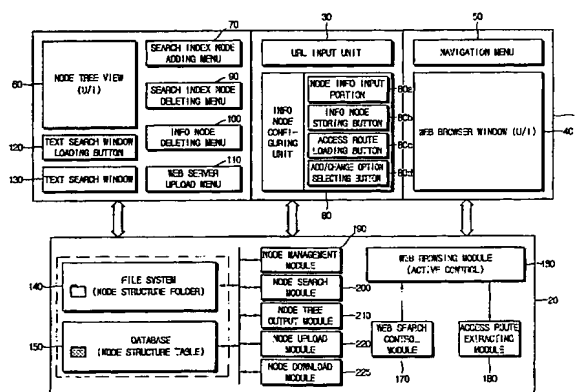
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(54) Title: METHOD OF COLLECTING AND SEARCHING FOR ACCESS ROUTE OF INFORMATION RESOURCE ON INTERNET AND COMPUTER READABLE MEDIUM STORED THEREON PROGRAM FOR IMPLEMENTING THE SAME



(57) Abstract: Disclosed is a method for systematically collecting and searching for access routes of information resources. Search index node is formed in hierarchical tree structure in the computer. Basic search information including access route and name of resource loaded on web browser is input with selection of search index node. Information node is configured and stored in linkage with the selected search index node based on the basic search information. Text search window is provided to the user to receive hierarchical information node access route distinguished by identifier, output node name list in the hierarchy corresponding to the identifier, receive user selection of node name from the list, and adds the selected node name to the identifier to hierarchically extend the access route step by step. When settled, the access route is extracted, and target information resource is obtained through Internet to be output to the user.

What is claimed is:

1. A method for systematically collecting and searching for an access route of an information resource on Internet so that a program executed on a computer systematically collecting access routes of information resources on Internet and provides
5 a text-based information searching environment, the method comprising:

(a) forming a search index node in a hierarchical tree structure in a storage medium of the computer according to a request of a user;

(b) receiving basic search information including an access route and a name of
10 an Internet information resource loaded by a user using a web browser, and a selection of a search index node to be linked with the basic search information from the user, and then configuring and storing an information node in linkage with the search index node selected by the user on the basis of the basic search information;

(c) providing a text search window to the user, receiving a hierarchical
15 information node access route distinguished by a search event identifier through the search window, outputting a name list of search index nodes and/or information nodes in a hierarchy corresponding to an input order of the identifier when there is an input of the identifier, receiving a selection of the user for a node name included in the name list, and then adding the selected node name to the identifier so that the access route to the
20 information node is hierarchically extended step by step; and

(d) when an access route to a target information node is settled, extracting an access route of an Internet information resource corresponding to the corresponding information node, obtaining a target Internet information resource through Internet with

the use of the extracted access route, and then outputting the target Internet information resource to the user.

2. The method for systematically collecting and searching for an access
5 route of an information resource on Internet according to claim 1,

wherein the search index node is composed of a file folder with a name designated by the user.

3. The method for systematically collecting and searching for an access
10 route of an information resource on Internet according to claim 2,

wherein the information node is composed of a file capable of extracting information about a name and an access route (URL: Uniform Resource Locator) of the information resource on Internet.

15 4. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 3,

wherein the hierarchical tree structure of the search index node formed in the step (a) is output to the user as a graphic interface.

20 5. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 3,

wherein, in the step (b), the information node file is stored in a search index folder selected by the user.

6. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

wherein the hierarchical information node access route has a format in which at least one node name with a search event identifier as a prefix is connected in series.

7. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

wherein, in the step (c), the process of outputting the node name list according to the input of the search identifier and the process of extending the information node access route according to the selection of a name of a node included in the list are repeated in a cycle until a target information node is output in the node name list.

8. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 7,

wherein, in the step (d), the settlement of an access route to the target information node is accomplished by means of a selection of the target information node output in the node name list.

9. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

wherein, in the step (c), when the user inputs a text syllable by syllable in the state that the node name list is output, a node selection curser is automatically moved to

a node name having the input text.

10. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 9,

5 wherein, in the step (c), when the user manipulates a predetermined node name selection key prepared on a keyboard in the state that the node selection cursor is moved to a predetermined node name, the node name is added to the search event identifier so as to extend the information node access route by one step.

10 11. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

wherein the hierarchical information node access route has a format in which names of search index nodes, each having a search event identifier as a prefix, are connected repeatedly.

15 12. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

wherein, in the step (d), the process of outputting the target Internet information resource is any of outputting a web page through the web browser, regenerating a moving picture media by means of a moving picture regenerator whose execution route is registered in the web browser, regenerating a music by means of a music regenerator whose execution route is registered in the web browser, and outputting a corresponding file by means of an application program whose execution route is registered in an

20

operation system.

13. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 1,

5 wherein, in the step (b), a brief description about the Internet information resource is further input from the user as the basic search information to configure the information node.

14. The method for systematically collecting and searching for an access
10 route of an information resource on Internet according to claim 1,

wherein the storage medium is a relational database, and

wherein the search index node and the information node are respectively implemented as records in a node structure table provided in the relational database.

15. The method for systematically collecting and searching for an access
15 route of an information resource on Internet according to claim 14,

wherein the node structure table includes fields for recording a record-specific identification code; a node name; a node identification code for distinguishing a search index node and an information node; an identification code of a hierarchy to which a
20 node belongs in the hierarchical tree structure; a reference code for a parent node of each node in the hierarchical tree structure; and an access route to an Internet information resource.

16. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 15, wherein the step (a) includes:

(a1) receiving a selection of a name and a parent search index node of a search index node to be formed from the user; and

(a2) forming a search index node in a database as a record form by recording a record-specific identification code; a node name; a node identification code designated as a search index node; and a reference node of the selected parent search index node, in corresponding fields of the node structure table.

17. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 16,

wherein the records corresponding to the search index node includes a record-specific identification code; a node name; a node identification code; and a parent node reference code.

18. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 16,

wherein the node structure table further includes a field for recording a brief description of each node,

wherein the step (a1) further receives a brief description of the search index node, and

wherein the step (a2) further records the brief description in the corresponding

field.

19. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 15, wherein the step (b)
5 includes:

(b1) receiving the basic search information including an access route and a name of an Internet information resource loaded by the user using the web browser and a selection of a search index node to which the basic search information is linked in a parent-child relation, from the user; and

10 (b2) forming a record-type information node in a database by recording a record-specific identification code; a node name; a node identification code designated as an information node; a reference node of the selected parent search index node; and an access route to the Internet information resource, in corresponding fields of the node structure table.

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20. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 19,

wherein the record corresponding to the information node includes a record-specific identification code; a node name; a node identification code; a parent
20 node reference code; and an Internet information resource access route.

21. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 19,

wherein the node structure table further includes a field for recording a brief description of each node,

wherein the step (b1) further receives a brief description of the information node; and

5 wherein the step (b2) further records the brief description in the corresponding field.

22. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 15,

10 wherein, in the step (c), the name list is made by reading records of a search index node and/or an information node linked as a child to the search index node belonging to the hierarchy according to the input order of the identifier input by the user and corresponding to a node name extended just before, extracting a node name from the read record, and outputting the node name in a list.

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23. The method for systematically collecting and searching for an access route of an information resource on Internet according to claim 22,

wherein, in the step (d), the access route to the Internet information resource is extracted from the read record.

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24. A method for sharing an access route to an information resource on Internet with another person through a web server by a program installed on a computer in linkage with the web server, the method comprising:

(a) forming a search index node in a hierarchical tree structure in a storage medium of the computer according to a request of a user with a designated name;

(b) receiving basic search information including an access route and a name of an Internet information resource loaded by the user using a web browser, and a selection
5 of a search index node to be linked on the basis the basic search information from the user, configuring an information with the basic search information, and then storing the information node in linkage with the search index node selected by the user;

(c) uploading a node structure including a search index node and an information node, constructed in a hierarchical tree structure, into a dedicated storage area
10 distinguishable by means of a user ID of the web server according to an upload request of the user;

(d) requesting and receiving a user ID list possessing the node structure uploaded in the web server to/from the web server according to a request of a user, outputting the user ID list to the user, and receiving a selection of the user about a predetermined ID
15 included in the ID list so that a node structure that is a search target of the information node is specified;

(e) providing a text search window to the user, and receiving a server-side hierarchical information node access route distinguished by a search event identifier through the search window,

20 wherein, when there is an input of an identifier, the step (e) requests the web server with a name list of a child search index node and/or information node linked to a parent search index node prior to the input of the identifier and then stands by, and wherein, when the web server generates and transmits the requested name list in the

node structure specified in the step (d), the step (e) transmits the name list to the user, then receives a selection of the user about a predetermined node name included in the name list, and adds the selected node name to the identifier so that a server-side access route of the information node is hierarchically extended step by step; and

5 (f) when an access route to a target information node is settled, extracting an access route of an Internet information resource from the corresponding information node, obtaining a target Internet information resource through Internet with the use of the extracted access route, and then outputting the target Internet information resource to the user.

10

25. The method for sharing an access route to an information resource on Internet with another person according to claim 24,

 wherein, in the step (a), the search index node is composed of a folder having a name designated by the user.

15

26. The method for sharing an access route to an information resource on Internet with another person according to claim 25,

 wherein, in the step (b), the information node is a file capable of extracting information about a name and URL of the information resource on Internet.

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27. The method for sharing an access route to an information resource on Internet with another person according to claim 26,

 wherein, in the step (b), the information node file is stored in a search index

folder selected by the user.

28. The method for sharing an access route to an information resource on Internet with another person according to claim 25,

5 wherein the hierarchical information node access route has a format in which at least one node name having a search event identifier as a prefix is connected in series.

29. A method for sharing an access route to an information resource on Internet with another person through a web server by a program installed on a computer
10 in linkage with the web server, the method comprising:

(a) forming a search index node in a hierarchical tree structure in a storage medium of the computer according to a request of a user with a name of the search index node being designated;

(b) receiving basic search information including an access route and a name of
15 an Internet information resource loaded by the user using a web browser, and a selection of a search index node to be linked on the basis the basic search information from the user, configuring an information with the basic search information, and then storing the information node in linkage with the search index node selected by the user;

(c) reading a node structure including a search index node and an information
20 node recorded in the node structure table according to an upload request of the user, and uploading the node structure including into a database in linkage with the web server by means of identification of a user ID;

(d) requesting and receiving a user ID list possessing the node structure uploaded

in the web server to/from the web server according to a request of a user, outputting the user ID list to the user, and receiving a selection of the user about a predetermined ID included in the ID list so that a node structure that is a search target of the information node is specified;

- 5 (e) providing a text search window to the user, and receiving a server-side hierarchical information node access route distinguished by a search event identifier through the search window,

 wherein, when there is an input of an identifier, the step (e) requests the web server with a child search index node and/or an information node linked to a parent
10 search index node prior to the input of the identifier and then stands by, and wherein, when the web server reads and transmits records of a requested node in the node structure specified in the step (d), the step (e) extracts a name list of the node from the transmitted records, outputs the name list to the user, receives a selection of the user about a predetermined node name included in the name list, and adds the selected node
15 name to the identifier so that a server-side access route of the information node is hierarchically extended step by step; and

 (f) when an access route to a target information node is settled, extracting an access route of an Internet information resource included in the corresponding information node with reference to information of the transmitted records, obtaining a
20 target Internet information resource through Internet with the use of the extracted access route, and then outputting the target Internet information resource to the user.

30. The method for sharing an access route to an information resource on

Internet with another person according to claim 29,

wherein the search index node is composed of a record of the node structure table, and

wherein the step (a) records a record-specific identification code; a node name; a
5 node identification code designating that the node is a search index node; and a parent
node reference code, in a record corresponding to the search index node.

31. The method for sharing an access route to an information resource on
Internet with another person according to claim 30,

10 wherein, in the step (a), a brief description of the search index node is further
received from the user, and

wherein the brief description of the node is further recorded in a record
corresponding to the search index node.

15 32. The method for sharing an access route to an information resource on
Internet with another person according to claim 29,

wherein the information node is composed of a record of the node structure table,
and

wherein the step (b) records a record-specific identification code; a node name; a
20 node identification code designating that the node is an information node; and a parent
node reference code, in a record corresponding to the information node.

33. The method for sharing an access route to an information resource on

Internet with another person according to claim 32,

wherein, in the step (b), a brief description of the information node is further received from the user, and

wherein the brief description of the node is further recorded in a record
5 corresponding to the information node.

34. The method for sharing an access route to an information resource on Internet with another person according to claim 29,

wherein, in the step (c), the node structure includes information about each
10 record for the search index node and the information node, and

wherein a user ID is endowed to each record and then the record is recorded in a server-side node structure table provided in a database in linkage with the web server.

35. A method for accessing an Internet information resource with reference
15 to a node structure on Internet, which is formed by means of a web server by repeatedly and accumulatively executing the following processes: composing a search index node in a mass storage medium in a hierarchical category structure, composing an information node for various Internet information resources so that the information node includes a name and an access route of each Internet information resource, and then
20 linking the information node to a lower hierarchy of a predetermined search index node, the method comprising:

(a) providing a text search window to a user by means of a web browsing program installed on a computer of the user, and receiving a server-side hierarchical